CLAIMS:

1. Optical disk system comprising at least one photo detector for detecting at least a part of said optical disk and in response generating detection signals and comprising at least one amplifier for amplifying detection signals and comprising at least one slicer for slicing amplified detection signals and comprising at least one delay-difference detector for detecting delay differences in sliced amplified detection signals, characterized in that said delay-difference detector is delaylineless and comprises combinatorial-logic circuits and sequential-logic circuits.

2. Optical disk system according to claim 1, characterized in that said delay-difference detector comprises a first pair of sequential-logic circuits for detecting delay differences between rising edges and comprises a second pair of sequential-logic circuits for detecting delay differences between falling edges.

3. Optical disk system according to claim 2, characterized in that said delay-difference detector further comprises at least one analog adder/subtracter for adding/subtracting sequential-logic circuit output signals.

4. Optical disk system according to claim 3, characterized in that said delay-difference detector comprises at least one low pass filter coupled to an output of said at least one analog adder/subtracter.

5. Optical disk system according to claim 3, characterized in that said delay-difference detector comprises at least one low pass filter located between at least one sequential-logic circuit and said at least one analog adder/subtracter.

6. Delay-difference detector for use in an optical disk system comprising at least one photo detector for detecting at least a part of said optical disk and in response generating detection signals and comprising at least one amplifier for amplifying detection signals and comprising at least one slicer for slicing amplified detection signals and comprising at least

one delay-difference detector for detecting delay differences in sliced amplified detection signals, characterized in that said delay-difference detector is delaylineless and comprises combinatorial-logic circuits and sequential-logic circuits.

7. Delay-difference detector according to claim 6, characterized in that said delay-difference detector comprises a first pair of sequential-logic circuits for detecting delay differences between rising edges and comprises a second pair of sequential-logic circuits for detecting delay differences between falling edges.

8. Delay-difference detector according to claim 7, characterized in that said delay-difference detector further comprises at least one analog adder/subtracter for adding/subtracting sequential-logic circuit output signals.

9. Method for use in an optical disk system and comprising the steps of detecting at least a part of said optical disk and of in response generating detection signals and of amplifying detection signals and of slicing amplified detection signals and of detecting delay differences in sliced amplified detection signals, characterized in that said step of detecting delay differences is delaylineless and comprises the substeps of combinatorial-logic circuiting and sequential-logic circuiting.

10. Method according to claim 9, characterized in that said step of detecting delay differences comprises the substeps of detecting delay differences between rising edges and of detecting delay differences between falling edges.

11. Optical disk system according to claim 1, characterized in that said photo detector comprises several subdetectors segmented by division lines which are positioned as tilted by an angle in a range 45 ± (0-40) degrees with respect to a track direction for said generating of detection signals for reading data from said optical disk.